

persons use the left cerebral hemisphere in writing and become aphasic in left hemiplegia, but the power of writing with the right hand is lost. Must we believe that the hemiplegia and motor aphasia are the result of a lesion in the right, and the agraphia of a lesion in the left hemisphere? Agraphia, says Mirallié, is due to alteration of the word-percept. A motor aphasiac cannot spell better with lettered blocks than he can write; he has, therefore, no loss of graphic images.

Mirallié records sixty-two cases of sensory aphasia; most of these have been previously published, though some have been studied by himself. An important case is given at length. SPILLER.

REVUE DES SCIENCES MEDICALES. [Review of the Medical Sciences.] January, April, July and October, 1896. Paris: Masson et Cie.

The four annual numbers of the *Revue* contain an immense number of useful abstracts and an extensive bibliography in addition. While the proportion of neurological and psychological matters treated is not very large, what is given is well done, and American contributors to the subjects seem to have received their due share of credit.

MITCHELL.

DIE SYPHILITISCHEN ERKRANKUNGEN DES GEHIRNS. [The Syphilitic Diseases of the Brain.] By Prof. Dr. H. Oppenheim, Berlin. Nothnagel's specielle Pathologie und Therapie. Vienna, 1896.

It was not at first intended to include a monograph by Oppenheim on cerebral syphilis in Nothnagel's system, but no one will regret the change of plan. Such diseases as tabes and general paresis, which are supposed to be due in some unknown way to syphilis, are not discussed in this work. A few of Oppenheim's most important statements are as follows:

Contrary to an opinion once held, it has been shown by recent investigations that syphilis of the central nervous system may develop within the first year, or even first six months after infection, and occasionally in advance of the roseola. The knowledge of this fact is due to more exact observation, and yet Oppenheim believes that the nervous system is affected more rapidly now by the syphilitic virus than in former years. It seems that the milder forms of constitutional syphilis are more apt to involve the nervous system than the severe, and, indeed, cases occur in which the only specific lesions found are in this system. Usually the signs of hereditary syphilis develop early in life, though it is not uncommon for them to be first detected at the period of puberty, or even later.

As the gumma probably grows from the vessels or connective tissue of the meninges, it is usually found either in the meninges or the peripheral layer of the brain, though it may be located within the medullary substance or central ganglia. Even in these portions the origin of the growth is in the pial processes or vascular walls. Gummata more commonly are found at the base of the brain, and especially in the interpeduncular space, and on the optic chiasm, and when they occupy the convexity, they are more frequently located on the frontal and parietal lobes. Cerebral syphilis, as a rule, is a diffuse process. Some observations have shown that primary syphilitic neuritis of one or more cranial nerves, or of many of the spinal roots, may occur. The vessels, also, may be independently affected, and the circle of Willis is especially liable to syphilitic disease. In one of Oppenheim's cases a circumscribed lesion of the basilar artery was the only manifestation of cerebral syphilis. All authors do not believe that the fatty degeneration and calcification, which are found in endarteritis deformans, are absent in the syphilitic form. Syphilis is the cause of a large proportion of the aneurysms of the cerebral arteries.

Many writers have agreed that it is difficult, or even impossible,

to make a positive diagnosis of syphilis from the histological changes in the central nervous system. Important diagnostic points are: the tendency of the process to involve the arteries of a certain calibre or only portions of these; the youthful age of the patient, and the syphilitic lesions of other organs. Certain forms of sarcomatosis may resemble syphilis, and although circumscribed tumors may be found in this process, they do not, as a rule, present caseation or the characteristic lesions in the arteries of the circle of Willis, and the process does not tend to spread from the meninges to the brain and cord. More difficult is the diagnosis between syphilis and tuberculosis. The presence of the tubercle bacillus is, of course, decisive. A purulent exudate in the meninges, or in a tumor, is almost always tuberculous, or, at least, some process not syphilitic. In a few cases in which pus has been found in syphilitic meningitis, it was probably the result of a mixed infection. Miliary tumors are usually tuberculous. Obliterating endarteritis of the basal vessels, with intact meninges, is more common in syphilis, though this condition may be found in tuberculosis. The most reliable sign is the presence of tuberculous lesions in other portions of the body, and yet patients with syphilis of the nervous system may die from tuberculosis. Syphilis may appear as meningitis without tumors, or as pachymeningitis hæmorrhagica, or as encephalitis and softening not due to vascular disease or new growths. It may cause inflammation and degeneration of the nuclei of the cranial nerve. The syphilitic virus may, undoubtedly, cause general paresis, and Moeli, even in true cerebral syphilis, has found destruction of cortical fibres. The same cerebral changes occur in the hereditary as in the acquired form of syphilis.

The nerves arising in the posterior cranial fossa are less apt to be affected, as the meningitis is not found in this part of the brain as frequently as on the pons and cerebral peduncles. Focal symptoms may be due to the growth of the syphiloma into the brain, but more commonly they are the result of vascular disease, and hemiplegia produced in this way usually develops in successive attacks. Headache is an early and almost constant symptom of syphilitic cerebral meningitis, and in the basal form it is usually felt deep within the cranial cavity. The headache is often associated with vomiting, and its severity may interfere with sleep, though cerebral syphilis may cause insomnia independently of the cephalalgia. It is not usual in basal syphilis to find the gradually increasing stupor seen in brain tumors, but the stupor occurs in attacks, though cases have been reported in which a fatal coma was the only symptom of cerebral syphilis. Drowsiness is a common symptom, and delirium also occurs. Polydipsia and polyuria are not uncommon symptoms of basal syphilis, and usually in such conditions there is involvement of the second and third nerves, and these may be the only cranial nerves affected. Oppenheim observed polyuria and polydipsia in eleven out of thirty-six patients who were believed to be suffering from basal syphilitic meningitis. It is not necessary that there should be an anatomically demonstrable lesion of the oblongata or vagus for the production of these symptoms. In two of Oppenheim's patients the meninges of the interpeduncular space were affected, but there were no evidences of syphilis in the posterior fossa. The interpeduncular space is so commonly the location of basal syphilitic meningitis that Ricord has called the paralysis of the third nerve "the signature of syphilis." Vision may be impaired when nothing abnormal is seen with the ophthalmoscope, but a permanent and complete blindness is rare in syphilis. Rapidly developing amaurosis, with a normal appearance of the fundus, may simulate hysteria. Rigidity of the pupil to light is also observed in basal syphilitic meningitis. The third nerve may be entirely penetrated by gummatous tissue, and yet only a few muscles supplied by this nerve may

be paralyzed. Ptosis from unknown cause should always suggest syphilis.

The apoplectic insult may be the first sign of cerebral syphilis. The typical course, however, is subacute with remissions and exacerbations. The arteritis of the Sylvian artery not infrequently causes thrombosis, usually with premonitory symptoms, such as headache, vomiting, vertigo, etc. The formation of the thrombus is a slow process, and there may be first weakness of one side, which later becomes paralysis; or one limb may be paralyzed, and after some hours the other on the same side may be affected. A similar mode of development of hemiplegia may occur in senile arteriosclerosis, and is not pathognomonic of syphilis, but symptoms, such as weakness, or aphasia, resulting from closure of vessels for hours or days, are very characteristic of syphilis. There have been cases of cerebral syphilis with the symptom-complex of general paresis, which has been due to a general involvement of the cerebral arteries. As a rule, disseminated sclerosis may be distinguished from cerebrospinal syphilis, but Oppenheim has occasionally found the differential diagnosis impossible. Cerebrospinal syphilis may present the symptom-complex of combined systemic disease, but the presence of cerebral symptoms, or the peculiar course of the disease, may make a diagnosis possible. There are cases of cerebral syphilis which cannot be distinguished from general paresis, and which, indeed, become cases of paresis.

Oppenheim has observed that cerebral syphilis assumes an especially serious aspect when the early manifestations have not been treated. The prognosis depends, to some extent, on the general condition of the patient, and alcoholic excesses and head injuries favor the development of the disease. The prognosis is also better as long as the process is extracerebral, *i. e.*, in the meninges and nerves, and not in the vessels. Oppenheim states that in seven persons with cerebral syphilis, treated by him, there had been no relapses for five to ten years after recovery. In his opinion it is not safe to depend on the iodide alone, but mercury should also be employed. He usually gives two to five grammes of iodide of potassium daily to an adult, and soon increases the dose, even to six or ten grammes daily. He employs three to six grammes of mercurial ointment, and stops after thirty or forty applications, though he thinks it is wise to repeat the treatment three to six months later, even if the symptoms have disappeared; and once yearly for two or three years.

SPILLER.

A Handbook of Medical Climatology, by S. Edwin Solly, M. D., M. R. C. S. Illustrated in black and colors. Lea Bros. & Co.